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Impact of Agricultural Livelihood Project on Livelihood Assets: A Study in Manmunai South West Divisional Secretariat Division of Batticaloa District, Sri Lanka

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ABSTRACT
Sustainable livelihood development project is a vital modern approach in fighting against poverty and reducing unemployment. An agricultural livelihood development project had been implemented in Manmunai South West Divisional Secretariat division of Batticaloa district during the period 2010 – 2015. The interventions were channeled through four programmes; "Family Development Plan", "Goat farming", "Cattle farming" and "Poultry farming". A research was carried out with the objective to assess the impact of agricultural livelihood development project on livelihood assets of the project beneficiaries. Structured questionnaires were administered to a random sample of 100 project beneficiaries through personal interview in selected five Grama Niladhari divisions. Data were analyzed using SPSS by employing frequencies and percentages. The study indicates that the agricultural livelihood project had made medium level impact on livelihood assets of the project beneficiaries in the study area. Further, most of the project beneficiaries belong to impact category range of medium to high level impacts. As such, the project had made a positive impact on the livelihood assets of project beneficiaries in the study area.

Key words: financial capital, human capital, natural capital, physical capital, project beneficiaries

INTRODUCTION

Agriculture has been the backbone of the Sri Lankan economy with one-thirds of the population being dependent on it (1). The agricultural sector contributes about 11.1 percent of the country's Gross Domestic product (GDP) and 31.0 percent of total employment. It is the livelihood of more than 1.8 million farmers (2). Although the country is moving towards industrialization, the agricultural sector still continues to be an important sector in the economy and contributes substantially to foreign exchange earnings and to GDP (3).

Poverty is widespread in the rural areas of Sri Lanka (4). The initiatives to improve livelihoods of rural population in Sri Lanka have been many, but the effect varies. Because of this reason, Sri Lanka is characterized by a prevalent income inequality (5). The degree and nature of poverty among rural communities has headed to implementation of a range of development projects aimed at improving rural livelihoods (6). Thus, many of the projects have been implemented with the argument that future economic, social, and environmental development among rural communities (7).

The District of Batticaloa is one of three districts in the Eastern Province of Sri Lanka. Agriculture is the mainstay of economy activity in the district together with fishing, animal husbandry with dairy farming and other small scale industries (8). There is considerable poverty level prevails in the district and agricultural productivity is low mainly due to underutilization of resources

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and adoption of primitive and subsistence oriented technologies (9).

Livelihood development project is considered as one of the most effective strategies and tool of empowerment and poverty mitigation (10). It comprises a range and combination of activities and choices that people undertake in order to achieve their livelihood goals (11). An agriculture oriented livelihood development project was implemented in Manmunai South West Divisional Secretariat (DS) division of Batticaloa district of Eastern Sri Lanka during the period 2010 - 2015. The present study was undertaken to assess the impact of agricultural livelihood development project on livelihood assets of the project beneficiaries.

LITERATURE REVIEW – LIVELIHOOD AND SUSTAINABLE LIVELIHOOD APPROACH

The concept of 'livelihood' was earlier defined by Chambers and Conway (12) as comprising the capabilities, assets including stores, resources, claims, access, and activities required for a means of living. Afterwards, Carney (13) defined the concept of 'livelihood' as the interaction between assets and transforming processes and structures in the context that individual find themselves. At the same time Scoones (14) defined 'livelihood' by incorporating the concept of sustainability. Conceptually, a 'Livelihood',

'Comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stresses and shocks, maintain or enhance its capabilities and assets, while not undermining the natural resource base' (14, p.5)

Sustainable livelihood approach (SLA) is generally referred as an approach to poverty reduction in low-income countries. It seeks to improve rural development policy and practice by recognising the seasonal complexity of livelihood strategies, helping to remove access constraints to assets and activities that complement existing patterns. Further, the SLA identifies ways of making livelihoods more able to cope with adverse trends or sudden shocks (15).

According to Allison and Ellis (15) the livelihood approach can be used in different ways based on the aim of the study or programme. It is being used as a 'process' tool in most of the development practices to make the beneficiaries in the development programmes to identify major opportunities and barriers (16). Further, a livelihood framework also forms the basis for policy relevant studies to identify the nature of income-generating and subsistence activities of rural people. In certain studies the framework has been used as a conceptual tool to re-examine the past strategies utilized by a development programme (15).

Further, SLAs facilitate to analyse the sustainability of livelihoods holistically and used to draw conclusions for short term actions and long term policy measures (17). Applicability at the micro-level (household) and middle-level (community) while taking into account of the macro-level (national) is the major strength of the SLA (18).

The ultimate goal of the SLA practitioners and researchers is to make recommendations to improve conditions, or opportunities, specifically for poor people. A research work carried out by Bui & Schreinemachers (19) among the resettlers in Vietnam highlights how SLA can be understood as a basis of development interventions. The particular research work was carried out among the resettlers who had to move for dam

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construction on the Da River. After deploying the SLA and from the conclusions drawn, the authors recommended better information for resettlement process. Further, they suggest that compensation need to be paid to resettlers in instalments rather than in a lump sum amount (20). The sustainable livelihood framework is not a universal solution or a model that aims to include all the main elements of people's livelihoods. But, it is a means of generating thought and analysis, and depending on the context it needs to be adapted and elaborated (21).

METHODOLOGY

The present study was carried out in five Grama Niladhari (GN) divisions under Manmunai South West Divisional Secretariat Division in Batticaloa District. The selected GN divisions were Mavadimunmari, Pandariyaveli, Kuluvinamadu, Kadukamunai and Katchenai. There are 24 GN divisions under Manmunai South West DS division. The agricultural livelihood development project was implemented in all those 24 GN divisions. According to number of project beneficiaries, major five GN divisions were selected for this study. Four different types of assistance, family development plan, goat farming, cattle farming and poultry farming, were provided to beneficiaries under this project. In proportion to number of project beneficiaries in each GN division, a total of 100 beneficiaries were randomly selected for this study.

Assessment of project impact on livelihood asset was carried out through 'livelihood assets utilization'. Livelihood assets utilization defines as a percentage of respondents who successfully utilized the different livelihood assets. It was measured by four sub-dimensions of the SLA, which include physical, human, financial and natural assets. In the present study, it was measured with the help of methodology developed by Sidsel *et al.,* (6) with suitable modifications to study context.

Physical capital

Physical capital was measured by three sub-dimensions which include water, electricity and sanitation. Water facility was measured by two sub-dimensions including water sources and drinking water availability, using appropriate indicators. The score for water facility of each respondent was calculated by summing the scores of above two dimensions; water sources and drinking water availability. Sanitation facility was measured by two sub-dimensions namely possession of a toilet and toilet condition. Summation of the score of two sub-dimensions yielded the sanitation score.

Human capital

Human capital was measured by two sub-dimensions; contribution to family income and literacy level. Summation of the score of two sub-dimensions yielded the human capital score.

Natural capital

Natural capital was measured by three sub-dimensions including having own land, having home garden and having livestock. Summation of the score of three sub-dimensions yielded the natural capital score.

Financial capital

Financial capital was measured by two sub-dimensions including working contribution and saving contribution. Summation of the score of two sub-dimensions yielded the financial capital score.

The possible scores of impact on asset vary from 10 to 20, where 10 to 13 indicates a 'poor' and 14 to 17 indicates a 'medium' and 18 to 20 indicates a 'High' level impact on livelihood asset.

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Table 1: Demographic composition of project beneficiaries

Demographic Variable	Frequency	%
Gender		
Male	42	42.0
Female	58	58.0
Age		
Lesser than35 years	10	10.0
35-45 years	54	54.0
More than 45 years	36	36.0
Farming experience		
Lesser than 10 years	60	60.0
10 – 20 years	34	34.0
More than 20 years	06	06.0
Educational level		
Illiterate	12	12.0
Primary education	62	62.0
Secondary education	20	20.0
Tertiary education	06	06.0
Occupational status		
Paddy farming	25	25.0
Vegetable sale	13	13.0
Fishing	03	03.0
Livestock farming	09	09.0
Daily wage	35	35.0
Housewife	10	10.0
Government employment	05	05.0
Household size		
1-3 members	42	42.0
4-5 members	50	50.0
Above 5 members	08	08.0

Source: Field survey, 2016

Table 2: Distribution of the respondents according to access to water source and water availability

Water source	%	Water availability	%
Pipe into dwelling	19.0	Always available in both wet & dry season	47.0
Protected public well	03.0	Not available during part of dry season	39.0
Tube well/ borehole	02.0	Not available throughout dry season	13.0
Open well in dwelling	26.0	Not available throughout dry season & some part of	
Open public well	50.0	wet season	01.0

Source: Field survey, 2016

Table 3: Distribution of the respondents according to availability of electricity

Electricity	Frequency	%
Available	84.0	84.0
Not available	16.0	16.0

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Table 4: Distribution of the respondents according to sanitation facilities

Category	Kind	Frequency	%
Yes	Bucket toilet	68.0	68.0
	Flushed to pit latrines	02.0	02.0
No		30.0	30.0

Source: Field survey, 2016

Table 5: Distribution of the respondents according to human capital

Literacy rate	%	Income contribution by family member	%
Able to read or write	52.0	Family members contribute to income	09.0
Not able to read or write	48.0	No contribution by family members	91.0

Source: Field survey, 2016

Table 6: Distribution of the respondents according to financial capital

Job location	%	Saving habit	%	Credit dependency	%
Having a job in village or nearby	64.0	Having saving habit	61.0	Dependency on credit	60.0
Having job outside the village	36.0	No saving	39.0	Non-dependency on credit	40.0

Source: Field survey, 2016

Table 7: Distribution of the respondents according to their available natural resources

Category	Own land	Home garden	Livestock
Yes	45.0	63.0	82.0
No	55.0	37.0	18.0

Source: Field survey, 2016

Table 8: Impact of agricultural livelihood project on livelihood assets

Categories of impact (Based on score)	Number of beneficiaries within the range	Mean
Low (10-13)	04	
Medium (14-17)	55	16.9
High (18-20)	41	

Source: Field survey, 2016

RESULTS AND DISCUSSION

Demographic composition

The demographic composition of project beneficiaries is shown in Table 1.

Physical capital

Indicator 1: Percentage of household having year round access to sufficient clean and safe drinking water with adequate quantity

The indicator 1 was measured by two components which included water source and water availability (Table 2). Table 2 shows

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half of the respondents (50%) accessed water from open public well, 26% of them from open well in dwelling, and 19% of them from piped into dwelling. Only few percentages of beneficiaries obtaining water from protected public well (3%) and tube well/borehole (2%), respectively. In case of water availability, 47% of the respondents get water in both wet and dry season and 39% of the beneficiaries do not get adequate quantity of water during part of dry season. Around 13% of them do not get water throughout the dry season. Further, it was also reported that 1% of beneficiaries do not get adequate quantity of water throughout the dry season and some part of wet season.

Indicator 2: Availability of electricity
Availability of electricity among project beneficiaries is shown in Table 3. The findings from Table 3 reveal that majority of the project beneficiaries (84%) have electricity facility..

Indicator 3: Proportion of households using improved sanitation facilities
The result of indicator 3 is presented in Table 4. It is apparent from Table 4 that, 70% of the respondents have own toilet facility. Among them 68% have bucket toilet and 2% have flushed to pit latrines. Further, 30% of them do not have own toilet compound.
The overall findings of above three indicators of physical capital indicate that project had a positive impact on physical capital of many clients. This result was supported with findings of Eoin Wrenn (22) who also reported positive impact of three microfinance development projects on physical capital of respective project beneficiaries.

Human capital
Human capital was measured by two indicators which include literacy rate and income contribution of family members and the results presented in Table 5. The results show that more than half (52%) of the beneficiaries' family members can read or write and rest of the family members cannot. Further, in 9% of the household every family member contributed to family income, and in 91% of the household all family members do not. This might due to various reasons that those families have elder person, child or school children. Scholars like Blackden and Bhanu (23) state that investment on human capital support rural livelihood.

Financial capital
Financial capital was measured by using three indicators which include, having a job in the village or nearby, saving culture and dependency on credit. Table 6 indicates the results of financial capital. According to the results, 64% of the respondents have a job in their village or nearby and 36% of the respondents have a job outside the village. With regard to saving, 39% of the beneficiaries save money in diverse ways while the rest did not save at all. The data reveal that 60% of the household have borrowed loan and 40% of the household does not borrowed any loan. Majority of the beneficiaries indicates that they depend on credit for their farming because their daily living expenditures absorb all of their earnings. This finding was contradicted with Eoin Wrenn, (22) and Ashong *et al.,* (24). They have reported that development projects have positive impact on the financial capital of their clients where clients earn a greater income than they did prior to joining the projects.

Natural capital
The results of natural capital are presented in Table 7. It shows that 45% of the beneficiaries have own land and 55% of them does not have own land. More than half of the household (63%) have home garden and 37%

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of the household does not have home garden. Further, majority (82%) of the household has own livestock. In the study area, most of the beneficiaries engaged in livestock farming and home gardening, which reveal that the project had made positive impact on the livelihood asset (natural capital) of the beneficiaries.

Overall impact of agricultural livelihood development project on livelihood assets

The asset utilization (natural, physical, financial and human capitals) was systematically scored and categorised under low, medium and high levels (Table 8). It is apparent from the table that the agricultural livelihood development project had a medium level impact on livelihood assets of the project beneficiaries. Further, it is good to note that majority of the project beneficiaries belong to impact category range medium (55%) to high (41%) levels.

CONCLUSIONS

Sustainable agricultural livelihood development projects play an important role in providing opportunities for livelihood enhancement of rural people. Such an agricultural livelihood development project was implemented in Manmunai South West DS division of Batticaloa district, Eastern Sri Lanka during the period 2010 - 2015. The present study was undertaken to assess the impact of agricultural livelihood development project on livelihood assets of the project beneficiaries. The study concluded that, the agricultural livelihood development project had medium impact on livelihood assets (physical, natural, financial and human capitals) of the project beneficiaries. Further, majority (96%) of the project beneficiaries belong to medium to high impact level. The government of Sri Lanka and relevant development agencies should provide necessary assistance for the enhancement of livelihood assets of people in the study area.

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